

SECOND ANNUAL EVALUATION OF THE COWLITZ COUNTY HEALTH DEPARTMENT NEEDLE EXCHANGE PROGRAM

March, 2002



**An Analysis By
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THE COWLITZ COUNTY HEALTH DEPARTMENT'S NEEDLE EXCHANGE PROGRAM EVALUATION January 01, 2000 - December 31, 2001

Introduction

As part of its strategic plan to reduce the transmission of bloodborne pathogens among county residents, the Cowlitz County Health Department has been operating a needle exchange program (NEP) since January 2000. The NEP operates from a department van two hours an afternoon, two afternoons a week. Since January 2001, the van has been permanently located in the department's parking lot, which offers exchangers increased privacy and facilitates their entry into needed health care.

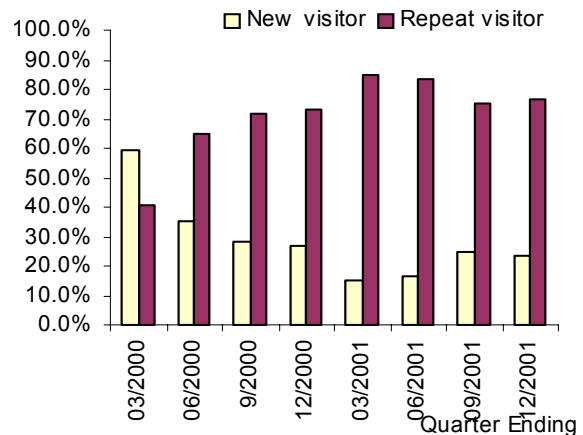


Program evaluation is part of the NEP: each person visiting the van is asked a series of questions about his or her demographic characteristics, whether or not they are exchanging for others, and their drug behavior. The same form notes which preventive services they were given or referred to. Neither names nor addresses are collected. Thus, these data describe visits, not individuals. This report gives annual data for 2000 and 2001 and uses quarterly data to measure trends.

Persons Reached

In calendar year 2000, the first year of operation, there were 707 visits to the NEP van. Throughout 2000, the number rose steadily from 46 in the first quarter to 253

Figure 2. New and Repeat Visitors, Cowlitz County Health Dept
Needle Exchange Program
January 1, 2000-December 31, 2001



in the fourth quarter (Figure 1). In 2001, there were 1,212 visits to the NEP, but the trend was different from that seen in 2000. In the first quarter, there was a drop to 199 visitors, probably a result of the van's relocation to the health department grounds. After that, the numbers rose steadily to 284 in the second quarter, 355 in the third, and 374 in the fourth. In the two years of its operation, the NEP has had 1,919 visits. (This figure is different from totals reported elsewhere which indicate only the number of people answering certain questions.) Many people exchange for both themselves and others. One evaluation question asks if they are exchanging for others and, if so, how many others. In 2000, the 707 visits represented 2,254 people (not an unduplicated

Figure 1. Visitors and Total Persons Exchanged For, Cowlitz County Health Department Needle Exchange Program
January 1, 2000-December 31, 2001

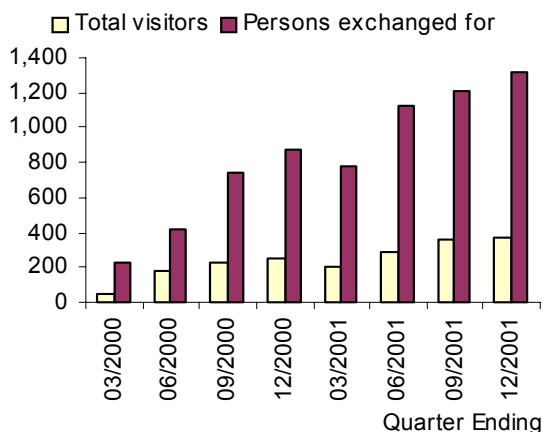
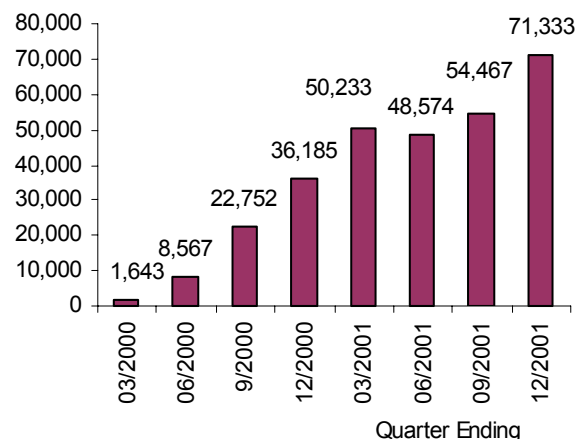
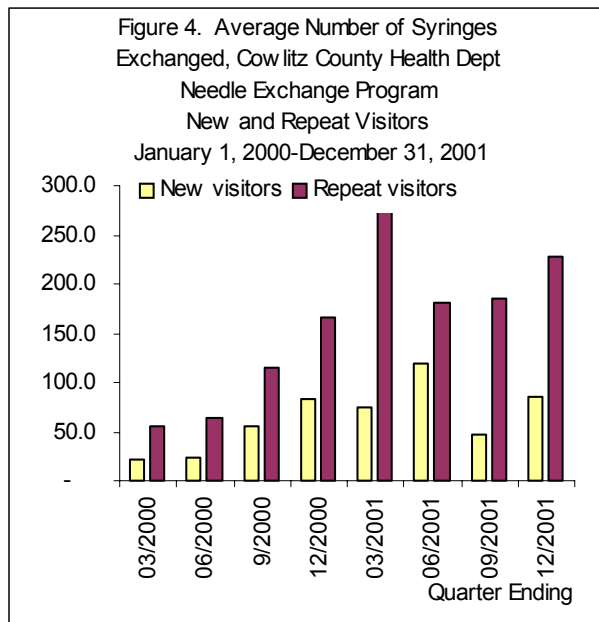


Figure 3. Syringes Exchanged, Cowlitz County Health Department Needle Exchange Program
January 1, 2000-December 31, 2001



count). In 2001, the 1,212 visits represented 4,421 people (not an unduplicated count). In the two years of its operation, the NEP has provided services to 6,675 people (not an unduplicated count). The trend in persons exchanged for follows the same pattern as that seen in the visitors: the number rose steadily until the first quarter of 2001, when it fell slightly, then increased the rest of the year (also shown in Figure 1).

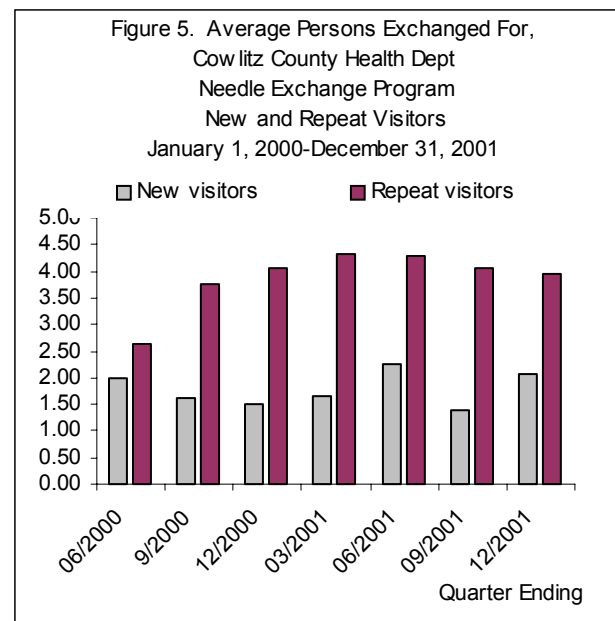
As might be expected, the number of repeat visitors has changed in the two years of the NEP's operation. Between the second quarter of 2000 and the same period of 2001, numbers fell steadily, to a low of 15.5% for the first three months of 2001 (Figure 2). Since then, however, the proportion of new visitors has increased, and by the last half of 2001 they made up about a quarter of all visits.



Syringes Exchanged

The number of syringes exchanged rose steadily from 1,643 in the first quarter of 2000 to 50,233 in the first quarter of 2001, 48,574 in the second quarter, and 54,467 in the third quarter (Figure 3). After a period of relative stability, in the final quarter of 2001, 71,333 syringes were exchanged. Viewed another way, in 2000, 69,147 syringes were distributed by the NEP, but in 2001, 224,607 were. On a per capita basis in 2000, 0.74 syringes per resident were exchanged, and in 2001, 2.39 per capita were exchanged.

Some of the increase can be explained by the high numbers of syringes exchanged in the last quarter of 2001 and some by the rise in new clients, but over time both new and repeat visitors have been bringing in more syringes to exchange. In 2000, an average of 97.8 syringes was brought in by all clients, while in 2001 the average was 185.3; the difference is statistically significant. First-time visitors in 2000 showed a steady in-



crease in the number of syringes they brought in until late in the year; since that time, the average has been relatively steady (Figure 4). Repeat visitors, on the other hand, hit a peak in the average number of syringes they exchanged in the first quarter of 2001, then a drop until the last quarter where there was an apparent and significant increase.

The number of additional people any one client is exchanging for can also affect the number of syringes exchanged. In 2000, each visitor represented another 3.13 people on average, but in 2001 that figure rose to an average of 3.64; the difference is statistically significant. There is no apparent pattern in the quarter-to-quarter fluctuation of persons exchanged for, but the number of people represented by repeat visitors is always significantly higher than the number represented by first-time clients (Figure 5).

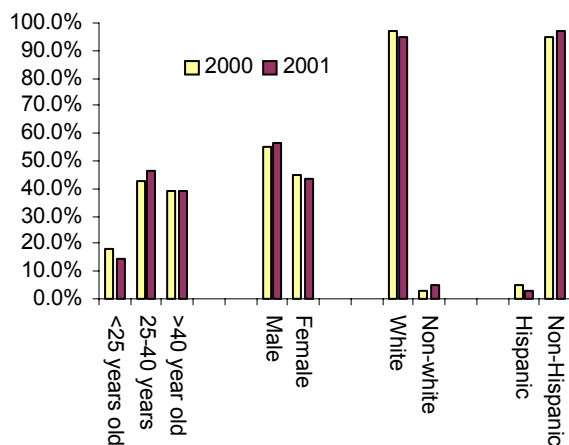
These two patterns – of increasing number of syringes being exchanged and of people being exchanged for – suggest the NEP has penetrated into networks of intravenous drug users. If that is true, then the people coming into the exchange can be influential in encouraging others to seek the treatment and preventive services available through the NEP.

Demographic Characteristics of Exchangers

Demographic data were collected on people who made 1,919 NEP visits in 2000 and 2001. Unlike many other needle exchange programs, clients in the Cowlitz County Health Department's NEP are almost evenly divided between men and women, about 55% to 45%, respectively (Figure 6). This was true for both 2000 and 2001.

The average age of 2000 visitors was 32.4, but the average age of 2001 visitors was 36.8 years; the difference is statistically significant. The mean difference in ages between men seen in 2000 and 2001, 37.5 and 36.3, respectively, is not statistically significant, but the mean

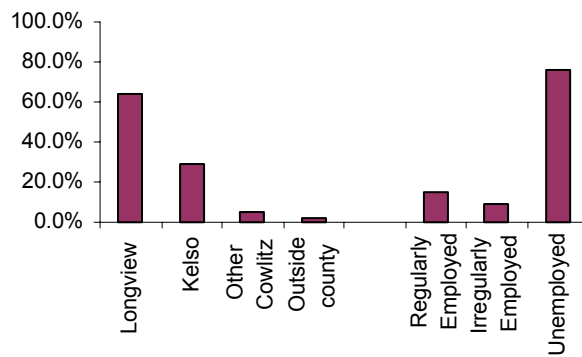
Figure 6. Age, Gender, Race, and Ethnicity,
Cowlitz County Health Department
Needle Exchange Program Visitors,
2000 and 2001



difference between women, 34.1 in 2000 and 37.2 in 2001, is. This progression toward an older age distribution can also be seen in Figure 6: 18% of clients in 2000 were younger than 25, 42.6% were 25 to 40 years old, and 39.4% were older than 40. In 2001 the comparable figures were 14.4% younger than 25, 46.2% 25 to 40, and 39.4% older than 40. For the entire two years, men made up a significantly disproportionate share of the 25-40 age group while women made up a disproportionate share of both those younger than 25 and those older than 40.

There was a significant shift in the racial and ethnic composition of NEP visitors between 2000 and 2001. In 2000, 2.9% of visitors were non-white; in 2001, that figure rose

Figure 7. Residence and Employment Status,
Cowlitz County Health Department Needle
Exchange Program Visitors
February 1 - December 31, 2001*



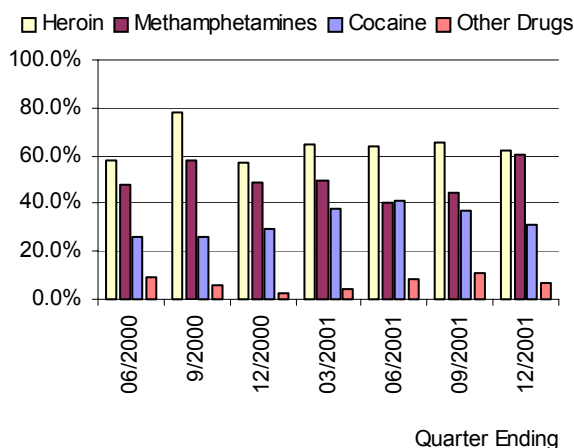
*NOTE: Residence question was added in February 2001, employment question in March 2001.

to 5.2% (also shown on Figure 6). However, in both years whites made up about 95% or more of all NEP clients. Hispanic clients accounted for 5.4% of the 2000 visitors but only 2.6% of the 2001 visitors. Again, the number of Hispanics is small, and non-Hispanics made up about 95% or more of all NEP clients.

Data on residence and employment have been collected only since February and March 2001, respectively, so we cannot compare the two years. Virtually all NEP clients reporting gave Cowlitz County as their places of residence: 64.4% gave Longview, 28.8% Kelso, 5.2% other county place, and 2.0% came from outside the county (Figure 7). Most of these were from either Cathlamet or Long Beach.

More than three-quarters of NEP clients were unemployed, 15% were regularly employed, and 8.6% were irregularly employed. Because most health insurance is provided through an employer, it is reasonable to assume that most NEP clients have no insurance coverage for health care.

Figure 8. Injecting Drug Preferences
Cowlitz County Health Department
Needle Exchange Program Visitors
May 1, 2000*- December 31, 2001

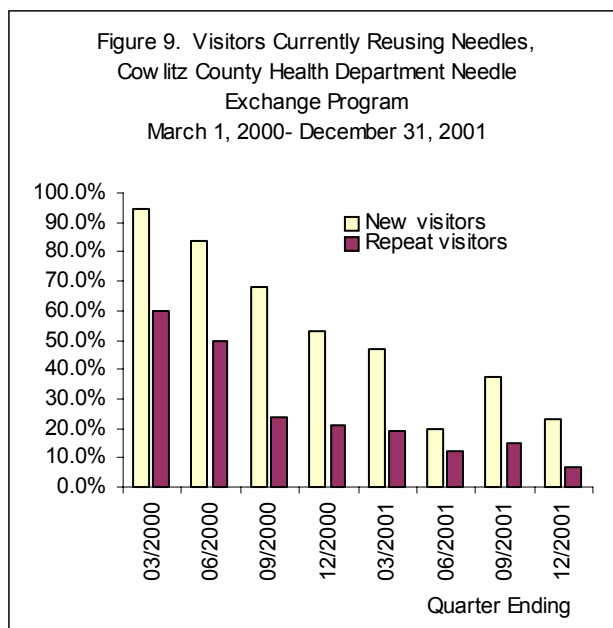


Drug-related Behavior

Data on drug use have been collected since May 2000. Levels of heroin and methamphetamines use were not significantly different between 2000 and 2001: 62.7% used heroin in 2000 and 64.2% in 2001, and 48.7% used methamphetamines in 2000 and 49.2% in 2001. But there was a significant increase in cocaine use, from 28.7% in 2000 to 36.4% in 2001, and in use of other unspecified drugs, from 4.8% in 2000 to 7.8% in 2001. Heroin was the drug used by the largest fraction of NEP clients, followed by methamphetamines (Figure 8). However, by the last quarter of 2001, metham-phetamine use had

increased to nearly the same level as heroin. This change occurs at the same time that we are seeing an increase in clients, particularly first-time ones, and in syringes exchanged. One interpretation of these trends is that by the end of 2001, the NEP might have reached new groups of drug users, those who are more likely to use methamphetamines. These trends will be monitored on a quarterly basis during 2002.

Two behaviors – reusing syringes and sharing them with others – are associated with greatly increased risks of transmitting bloodborne pathogens. There has been a significant decrease in needle reuse when 2000 and 2001 are compared. In 2000, 42.5% of all NEP clients said they reused syringes. In 2001, that figure fell to 16.2%. In every quarter, NEP first-time clients were significantly more likely to reuse syringes than those who used the NEP more often (Figure 9), but both new and repeat users have lower rates of needle reuse at almost every quarter as time progresses. This trend suggests that the importance of not reusing syringes is a value being communicated throughout the intravenous drug users,

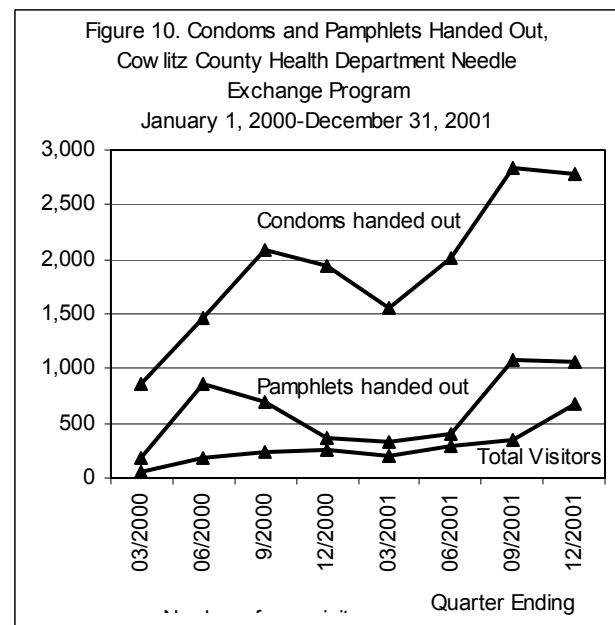


and that those who return are most likely to have modified their behavior.

Data on sharing syringes have been collected only since March 2001, and in all that time, only 53 out of 975 people (5.4%) reported sharing syringes. Because the numbers are so small, it is not possible to detect differences in needle sharing between first-time NEP clients and others, nor is it possible to detect differences by demographics or across time.

Efforts to Improve Clients' Health

Pamphlets and Condoms. In addition to providing clean syringes, the NEP also offers health education materi-



als and condoms. To date, more than 15,000 condoms and nearly 5,000 health information pamphlets have been distributed to NEP visitors (Figure 10). Distribution of both pamphlets and condoms fell during the second half of 2000, coincident with staffing changes in the NEP. Since then, distribution of both condoms and pamphlets has increased. There is a strong association between the type of drug a person uses and condom distribution. Specifically, those who used cocaine were significantly more likely to take condoms (37.8% of cocaine users, 31.7% of non-users) as were those who used methamphetamines (39.2% of methamphetamines users, 29.1% of non-users). In contrast, only 32.4% of heroin users took condoms compared with 37.0% of non-users. These rates are consistent with what is known about the effect of these three drugs on sexual behavior.

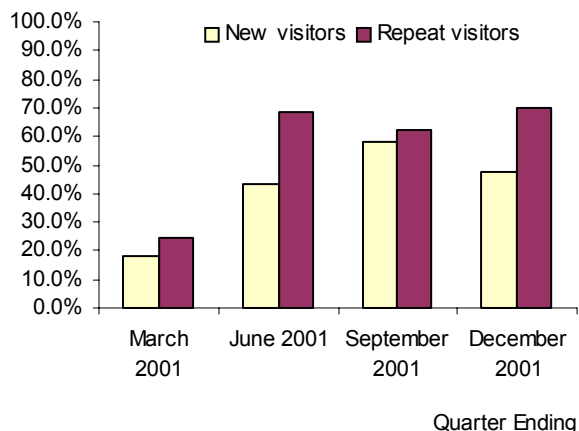
Hepatitis Immunization

In March 2001, the NEP began to emphasize hepatitis immunization. This change was made possible by the van's relocation; NEP visitors are asked about their immunization status and, if appropriate, sent a few steps into the health department to begin the vaccination process. In the first month of operation, 18.2% of new visitors and 24.2% of repeat visitors were immunized against Hepatitis A (Figure 11). Over the next three quarters, Hepatitis A vaccination rates rose to 70% in repeat visitors and 47.6% in first-time visitors.

A similar trend characterizes Hepatitis B vaccination. In March 2001, 18.2% of new visitors and 27.4% of repeat visitors had been immunized against Hepatitis B (Figure 12). By the last quarter, those levels had risen to 47.6% and 67.4%, respectively.

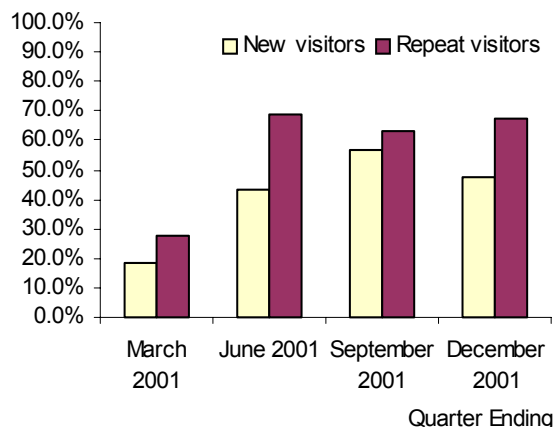
*NOTE Hepatitis immunizations questions were added in March 2001

Figure 11. Visitors Having Hepatitis A Immunization, Cowlitz County Health Department Needle Exchange Program
March 1, 2001* - December 31, 2001



*NOTE: Hepatitis immunization questions were added in March 2001

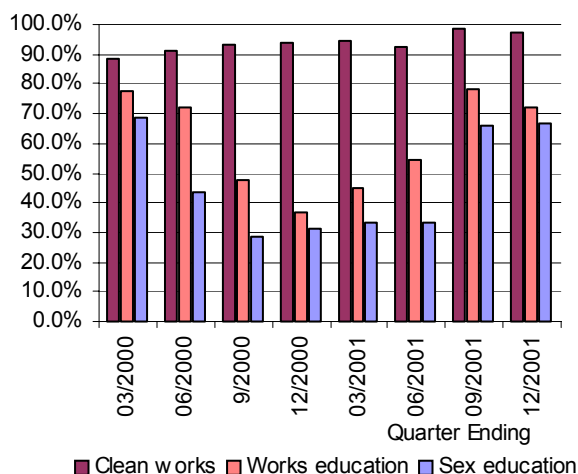
Figure 12. Visitors Having Hepatitis B Immunization, Cowlitz County Health Department Needle Exchange Program
March 1, 2001* - December 31, 2001



Risk-reduction Education

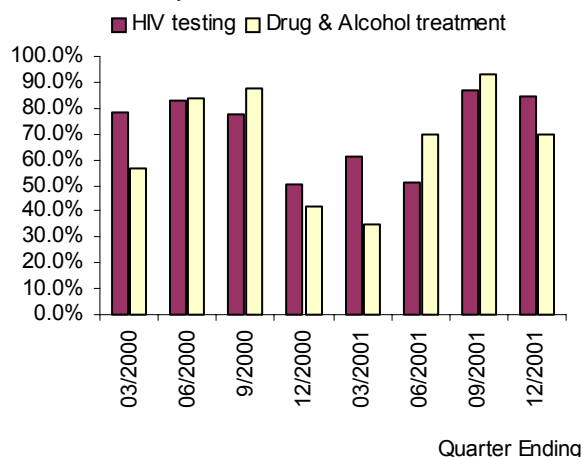
Nearly all people who come to the NEP, regardless of whether they are new or repeat visitors, are given bleach and other first aid equipment to clean their syringes and injection sites on their bodies (Figure 13). There has been no change in this level between 2000 and 2001. But in the past year, there has been a greater emphasis on systematic education about the need for clean works

Figure 13. Prevention Services, Cowlitz County Health Department Needle Exchange Program
January 1, 2000-December 31, 2001



and about safe sex (also shown in Figure 13). In 2000, 48.1% of all NEP clients were told about the need for clean works, and 31.8% were told about the need for safe sex. By 2001, those figures had risen to 64.6%

Figure 14. Referrals for HIV Testing and Drug Treatment, Cowlitz County Health Department Needle Exchange Program
January 1, 2000 - December 31, 2001



and 52.4%, respectively.

Referrals for Additional Health Services

The NEP also refers clients for health-related services. Referrals to health department services and to DSHS have been limited by eligibility criteria, and so the focus in this evaluation is on referrals for HIV testing and sub-

stance abuse treatment services.

Significantly more clients were referred for HIV testing in the NEP's second year than in the first (67.0% compared with 72.9%). This reflects the trend over time: In the first nine months of 2000, about 80% of clients were referred for HIV testing (Figure 14). Then these referrals fell to 50% and only in the second half of 2001 was the level characteristic of the program's early months regained.

A similar pattern characterizes referrals to drug and alcohol treatment. In 2000, 67.2% of clients were referred for these services, but in 2001, the referral rate rose to 71.0%. The trend over time has been similar for HIV testing: Referral rates rose steadily throughout 2000, then fell abruptly in the last quarter (also shown in Figure 14). Rates stayed low until the second quarter of 2001, and have varied since then but never fell below about 70%. Unlike the availability of HIV testing, which is under the health department's control, the availability of substance abuse treatment is affected by factors such as the number of treatment slots currently open and funding priorities, over which the department has no control.

Conclusion

In its first two years of operation, the Cowlitz County Health Department's NEP had 1,919 visitors (not unduplicated) and exchanged 293,754 syringes. Visitors increased from 707 to 1,212 between 2000 and 2001, and the number of syringes exchanged increased from 69,147 in 2000 to 293,754. In 2000, an average of 0.74 syringes per resident was exchanged; in 2001, that rate was 2.39 per resident. To put these numbers in perspective, look first at Clark County where the exchange rate is estimated to be 0.69 syringes per resident or in King County where the rate is about 0.58 syringes per resident. One possible explanation might be that the rate of intravenous drug use among Cowlitz County residents is about three times higher than in either Clark or King County. Another might be that this county's NEP has penetrated networks of drug users more quickly than other counties did. Regardless of interpretation, these exchange rates point to the continued need for the NEP in this county.

Some other conclusions can be drawn from the data in this report.

- The NEP seems to be drawing an older group of drug users, with average ages in their middle 30s but ranging up to 63.
- In 2001, the NEP drew more racial minorities than it had in its first year of operation but fewer Hispanics. However, about 95% of NEP clients are white and not Hispanic.
- About 98% of those coming to the NEP are Cowlitz County residents, primarily from Longview and Kelso,

and few of them work either regularly or irregularly.

- There was a significant decrease in the rate of needle reuse between 2000 and 2001, and the decrease occurred both among new and repeat visitors.
- The NEP's emphasis on hepatitis vaccination has led to greatly increased immunization rates among this high-risk population.
- After falling off for almost a year, the referral rates for HIV testing and drug and alcohol treatment increased in the most recent quarter. This shift was probably caused by both a change in program emphasis and the greater availability of substance abuse treatment options.

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TABLES

Figure 1. Visitors and total persons served, Cowlitz County health Department Needle Exchange Program

January 1, 2000-December 31, 2001

	Quarter ending...							
	03/2000	06/2000	09/2000	12/2000	03/2001	06/2001	09/2001	12/2001
<i>Total visitors</i>	46	175	233	253	199	284	355	374
<i>Persons exchanged for</i>	230	414	736	874	773	1,125	1,205	1,318

Figure 2. New or Repeat Visitors, Cowlitz County Health Department

Needle Exchange Program, January 2000-December 2001

	Quarter ending...							
	03/2000	06/2000	9/2000	12/2000	03/2001	06/2001	09/2001	12/2001
<i>New visitor</i>	59.6%	35.3%	28.4%	26.6%	15.5%	16.3%	24.6%	23.7%
<i>Repeat visitor</i>	40.4%	64.7%	71.6%	73.4%	84.5%	83.7%	75.4%	76.3%

Figure 3. Syringes exchanged, Cowlitz County Health Department Needle Exchange Program

January 1, 2000-December 31, 2001

	Quarter ending...							
	03/2000	06/2000	9/2000	12/2000	03/2001	06/2001	09/2001	12/2001
<i>Syringes out</i>	1,643	8,567	22,752	36,185	50,233	48,574	54,467	71,333
<i>Total visitors</i>	46	175	233	253	199	284	349	374
<i>Average out per visitor</i>	35.7	49.0	97.6	143.0	252.4	171.0	156.1	190.7

Figure 4. Average syringes exchanged, Cowlitz County Health Department Needle Exchange Program

New and Repeat Visitors, January 1, 2000-December 31, 2001

	Quarter ending...							
	03/2000	06/2000	9/2000	12/2000	03/2001	06/2001	09/2001	12/2001
<i>New visitors</i>	22.2	22.9	55.3	82.3	75.2	118.2	47.8	84.6
<i>Repeat visitors</i>	55.6	63.8	114.2	166.6	285.3	181.6	186.0	226.7

Figure 5. Average persons exchanged for, Cowlitz County Health Department Needle Exchange Program

New and Repeat Visitors, January 1, 2000-December 31, 2001

	Quarter ending...						
	<i>06/2000</i>	<i>9/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>	<i>12/2001</i>
New visitors	2.00	1.60	1.51	1.67	2.24	1.38	2.08
Repeat visitors	2.65	3.77	4.06	4.32	4.29	4.05	3.96

Figure 6. Demographic Characteristics of Visitors to Cowlitz County Health

Department's Needle Exchange Program, 2000 and 2001

Total Visitors to Needle Exchange:

Age composition	2001	2000
<25 years old	18.0%	14.4%
25-40 years old	42.6%	46.2%
>40 year old	39.4%	39.4%

Gender		
Male	55.1%	56.3%
Female	44.9%	43.7%

Race		
White	97.1%	94.8%
Non-white	2.9%	5.2%

Ethnicity		
Hispanic	5.4%	2.6%
Non-Hispanic	94.6%	97.4%

Figure 7. Residence and Employment Status of Visitors to Cowlitz County Health

Department's Needle Exchange Program, February 1-December 31, 2001

Residence	
Longview	64.1%
Kelso	28.8%
Other Cowlitz County	5.2%
Outside county	2.0%

Employment status	
Regularly Employed	15.0%
Irregularly Employed	8.6%
Unemployed	76.4%

Figure 8. Injecting drug preferences, Cowlitz County Health Department Needle Exchange Program Visitors,

May 1, 2000-December 31, 2001

	Quarter ending...						
	<i>06/2000</i>	<i>9/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>	<i>12/2001</i>
<i>Heroin</i>	58.3%	78.3%	57.3%	64.3%	64.1%	65.9%	62.6%
<i>Methamphetamines</i>	48.0%	57.6%	49.0%	49.3%	40.5%	44.2%	60.4%
<i>Cocaine</i>	25.7%	25.8%	29.6%	37.7%	41.5%	37.2%	31.0%
<i>Other Drugs</i>	9.0%	6.1%	2.8%	4.6%	8.1%	10.7%	6.4%

Figure 9. Visitors Currently Reusing Needles, Cowlitz County Health Department

Needle Exchange Program, March 1, 2000-December 31, 2001

	Quarter ending...							
	<i>03/2000</i>	<i>06/2000</i>	<i>09/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>	<i>12/2001</i>
<i>New visitors</i>	94.4%	83.6%	67.7%	53.3%	46.7%	20.0%	37.6%	23.2%
<i>Repeat visitors</i>	60.0%	50.0%	23.5%	20.8%	19.1%	12.0%	15.0%	7.0%

Figure 10. Condoms and pamphlets handed out, Cowlitz County Health Department

Needle Exchange Program, January 1, 2000-December 31, 2001

	Quarter ending...								<i>to-</i> <i>tal</i>
	<i>03/2000</i>	<i>06/2000</i>	<i>9/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>	<i>12/2001</i>	
<i>Total van visitors</i> 2,219	46	175	233	253	199	284	355	674	
<i>Number of pamphlets</i> 4,970	178	855	701	371	328	400	1,071	1,066	
<i>Number of condoms</i> 15,515	855	1,459	2,093	1,933	1,561	2,006	2,828	2,780	

Figure 11. Visitors Having Hepatitis A immunization, Cowlitz County Health Department

Needle Exchange Program, March 1, 2001* to December 31, 2001

	Quarter ending...			
	<i>March 2001</i>	<i>June 2001</i>	<i>September 2001</i>	<i>December 2001</i>
<i>New visitors</i>	18.2%	43.5%	58.1%	47.6%
<i>Repeat visitors</i>	24.2%	68.8%	62.4%	70.0%

Figure 12. Visitors Having Hepatitis B immunization, Cowlitz County Health Department

Needle Exchange Program, March 1, 2001* to December 31, 2001

	Quarter ending...			
	<i>March 2001</i>	<i>June 2001</i>	<i>September 2001</i>	<i>December 2001</i>
<i>New visitors</i>	18.2%	43.5%	57.0%	47.6%
<i>Repeat visitors</i>	27.4%	68.8%	63.1%	67.4%

Figure 13. Preventive Services Given to Cowlitz County Health Department

Needle Exchange Program Visitors, January 1, 2000-December 31, 2002

	Quarter ending...							
	<i>03/2000</i>	<i>06/2000</i>	<i>9/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>	<i>12/2001</i>
<i>Clean works</i>	88.6%	90.9%	93.4%	94.1%	94.5%	92.6%	98.9%	97.3%
<i>Works education</i>	77.3%	72.0%	47.4%	36.5%	45.2%	54.2%	77.9%	72.2%
<i>Sex education</i>	68.4%	43.9%	28.4%	31.1%	33.2%	33.4%	66.2%	66.4%

Figure 14. Referrals for HIV testing & drug treatment, Cowlitz County Health Department

Needle Exchange Program Visitors, January 1, 2000-December 31, 2002

	Quarter ending...						
	<i>03/2000</i>	<i>06/2000</i>	<i>9/2000</i>	<i>12/2000</i>	<i>03/2001</i>	<i>06/2001</i>	<i>09/2001</i>
<i>12/2001</i>							
<i>HIV testing</i>	78.3%	82.9%	77.8%	50.6%	61.0%	51.4%	87.0%
84.2%							
<i>Drug & Alcohol treatment</i>	56.5%	84.0%	87.4%	41.9%	34.7%	70.1%	93.2%
69.8%							
<i>DSHS</i>	47.8%	46.3%	51.0%	23.7%	7.3%	18.7%	16.3%
8.8%							
<i>Health department</i>	71.7%	66.9%	77.3%	39.9%	56.3%	40.5%	38.3%
23.0%							